

belong to this family, and form a section of it which has a soft thin skin.

The genus *Edwardsia*, Quatrefages (Ann. des Sci. Nat. xviii. 65, 1842), and *Solanthus* of Gosse (Ann. Nat. Hist. xii. 1853, p. 157), may also belong to this tribe, and form a section characterized by the middle portion of the skin of the body being thickened, so as to form an imperfect tubular polyperoid, into which the soft anterior and posterior portion of the body are retracted for protection.

The *Edwardsia vestita* of Forbes (Ann. Nat. Hist. viii. 244. t. viii. 1842, and xii. 42, 1843) is most probably a *Cerianthus*, which forms a tube of agglutinated sand, like many Annelides, for the base of its body.

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February 28, 1867.

Dr. J. E. Gray, F.R.S., V.P., in the Chair.

The Secretary called the attention of the Meeting to several recent additions to the Society's Menagerie, amongst which were—

1. A male example of the wild Swine of *Formosa* (*Sus taiwanus*, Swinhoe), received by the ship 'Island Queen,' January 17th, having been obtained for Mr. Swinhoe by Mr. Gregory, H.M. Vice-Consul at Tamsuy, and forwarded to the Society by Mr. Swinhoe.

This animal was stated by Mr. Selater to be very nearly allied to, if not identical with, *Sus leucomystax* of Japan, of which the Society had previously possessed a female specimen, and was apparently very different from the curious red pig of the savages of Formosa, of which Mr. Swinhoe had sent three examples to the Society on the 25th of October, 1866, in the 'Maitland,' and which had been spoken of as *Sus taiwanus* in a former communication on the subject (P. Z. S. 1866, p. 419).

2. A pair of Saiga Antelopes (*Saiga tatarica*, Pallas), received on deposit in November 1866, and recently purchased, as being apparently likely to do well in the Society's Menagerie. A drawing by Mr. Wolf was exhibited (Plate XVII.) showing the peculiar sheep-like appearance of this singular Antelope.

Mr. W. H. Flower exhibited a skull of the newly described Tapir of Panama (*Elasmognathus bairdi*, Gill, Pr. Acad. Sc. Phil. 1866, p. 183), belonging to the collection of the Royal College of Surgeons, and pointed out the characters which distinguish it from *Tapirus americanus* and *T. malayensis*, the most prominent of which was the complete osseous septum between the nasal apertures. Mr. Flower did not propose to give any further description of this animal at present, as it was understood that Professor Gill was preparing a complete account of it. The skull had been obtained by a collector at one of the stations of the Panama Railway.

In relation to the same subject, Mr. P. L. Selater read the following extract from a letter received by him from Capt. John M. Dow, F.Z.S., dated New York, January 17th, 1867:—

“The new Tapir from the Isthmus of Panama (*Tapirus bairdi*) appears to be the only species inhabiting that region of country. Not having seen an example of *T. americanus* I am unable to say whether it is, or is not, distinct in external appearance from *T. bairdi*. The young specimens of the latter I have seen were all marked on the back with light spots, and were covered with reddish-brown hair, which becomes darker, coarser, and uniform in colour in adult specimens.

“Thus far all examples of *T. bairdi* have exclusively been found on the Atlantic side of the isthmus, and north of the Chagres River. Their favourite haunts appear to be in the hills lying at the back of Sion Hill and the adjoining stations of the Panama Railway. It is only during the rainy season that they seem to seek the lowlands, for it is only in that season they are captured. They are not hunted by the natives; and it is only when they occasionally stray out into the open space of the railway that the young are sometimes captured alive, and the old ones shot.”

The Secretary read the following extracts from a letter, addressed by Dr. F. Mueller, of Melbourne, C.M.Z.S., to the ‘Australasian,’ on the 15th of December last, giving further particulars as to the Cassowary of Australia:—

“For the intelligence of the existence of an Australian true Cassowary, and for the means of defining preliminarily its specific characters, I am indebted to G. Randall Johnson, Esq., who in September last, while on a visit to Rockingham Bay, shot in the Gowrie Creek scrub the only specimen of this remarkable bird as yet obtained, and whose name I wish it should bear; and I cannot do better than to give in the first instance publicity to the lucid remarks transmitted to me by that gentleman:—

“The Cassowaries for some time past have been known to exist in the country about Rockingham Bay, but from their extreme shyness and caution have up to this time managed to escape every attempt to catch or kill them.

“The specimen shot is a male bird, and closely resembles the Helmeted Cassowary, but is of smaller size, its greatest height when standing in a natural position being not more than  $4\frac{1}{2}$  feet. The head and neck are almost entirely bare of feathers, and the skin of different shades of blue and red. On the top of the head is a horny substance of dirty light-brown colour; the beak is black, the irides of rich light brown; the skin from the beak along the top of the head, and extending 5 inches down the back of the neck, marine-blue; below this, still following the back of the neck down to the point at which the feathers become thick, a length of 5 inches, the skin is of a cinnabar-red tint, the underside of the head and throat, from the beak downward, being of ultramarine, and the small trian-

gular portion immediately adjoining the feathers of indigo-blue, and fluted or puffed, as it were, in ridges. At the bottom of the throat are two pendent caruncles of a bright red colour, very similar to those of the common turkey-cock, and 4 inches in length.

“The wings are very small, and contain six quills resembling those of the porcupine, the third pair from the upperside being 12 inches long, the pair immediately adjoining 11 inches, the next pair 6 inches, and the lowest of all 2 inches and curved.

“The leg, from the knee-joint downwards, measured 12 inches, and is very stout and powerful, whilst two of the toes of each foot are 5 inches, and the centre one 7 inches long. The inside toe is armed with a long sharp and strong nail, with which, no doubt, a serious wound might be inflicted. The feathers are of a deep black colour, and similar in shape to those of the Emu; at a distance they present the appearance of coarse hairs rather than of feathers.

“On the upper part of the breast the bone appears to be flattened, and the skin is bare of feathers, and very thick and horny.

“The bird seems to confine itself almost entirely to the more open parts of the scrubs, and seldom ventures far out on the plains. During the months of July, August, and September its food consists chiefly of an egg-shaped blue-skinned berry, the fruit of a large tree. This, together with herbage, probably forms its diet, at least for that portion of the year; but at present its habits have been so little observed that hardly anything is known concerning them.”

“From these notes, and a sketch simultaneously received, it is obvious that the *Casuaris johnsonii* must rank as a separate species. The size of the bird may be the same as that of the Indian *Casuaris galeatus*; the former, however, has the neck coloured with two shades of blue, and wants the broad squalid-violet vitta; and while in the Indian Cassowary the black hairy plumage commences immediately below the oblique violet band, and covers the lower portion of the neck quite along the scarlet posterior caruncle, the Australian bird shows an indigo-blue line descending in a cuneate-deltoid form to the thorax, quite as deep as the two cervical anterior appendages. The short lower curved quill is not noticed by any writer on the *Casuaris galeatus*, so far as I am aware, and seems, therefore, not to exist in that species. The caruncular appendages towards the sternum are given as pink in D’Orbigny’s ‘Dictionnaire Universel d’Histoire Naturelle,’ while Mr. Johnson describes them as bright red in the Australian species.”

In referring to this letter Mr. Selater called attention to the communication he had made on the same subject to the Meeting on December 13, 1866 (see P. Z. S. 1866, p. 557), and remarked that the bird was, no doubt, the *Casuaris australis*, Gould.

The following papers were read:—

1. On the Cause of Death of the Sea-Bear (*Otaria hookeri*) lately living in the Society's Gardens. By JAMES MURIE, M.D., Prosecutor to the Society.

The loss which the Society's Collection has recently sustained in the death of the Sea-Bear, a species of *Otaria*, is one which cannot readily be repaired.

The animal was attractive in a threefold manner,—its rarity in the live state in this country, its curious mode of progression in the water and on the land (differing much in this respect from its allied neighbours the true Seals), and, not the least attractive point, if only in a pecuniary sense to the Society, its remarkable intelligence and docility serving at all times to gather round it a crowd of interested visitors.

The anatomy of this *Otaria* I shall treat of at length in a separate communication, and in this confine myself alone to the symptoms of illness and the morbid appearances disclosed, as an answer to the very general question put to me, "What did the Sea-Bear die of?"

Adolphe Lecomte, its keeper, reported to me that on Friday the 8th of February he first noticed the animal's appearing to him dull, out of sorts, and careless of food. On the day following (Saturday) it exhibited decided symptoms of illness, besides continued want of appetite. It lay on the straw in the little railed enclosure in front of the outhouse, and, as he said, had swelling of the abdomen and breathed unnaturally.

I myself saw the creature for the first time after the commencement of symptoms of illness on the Sunday morning. The symptoms then were as follows:—It lay on its right side, breathing at regular intervals, taking each time a long inspiration, and which seemed mainly abdominal; the body and flippers felt unusually cold; the eyes were watery and languid, the pupils contracted; there was no swelling of the abdomen, and there no tenderness on pressure, but pressure at the posterior part of the thorax elicited manifestations of uneasiness. Over this last region there was dulness on percussion; and auscultation revealed indistinct crepitation. Altogether there existed no very evident symptoms of great pain.

There was thus a difficulty in exactly determining the nature of the illness, and consequently the proper treatment. Some castor-oil was given along with a fish, and afterwards a clyster, as Lecomte believed the animal to be constipated. A mat having been laid over the creature and the trelliswork well protected from the cold wind with straw, the next day the body and the flippers had become warmer; the breathing, however, was shorter and more oppressed. During the night there had been a slight evacuation. On Tuesday morning there passed along with other alvine matter a piece of canvas rolled tightly together in a cord-like manner, and in this was contained a bent fish-hook, which I now exhibit.

The symptoms were somewhat relieved, and there were hopes of amendment; but towards night the animal became worse, and died on the 14th inst.

The body was opened a few hours after death, when it was found that the stomach and intestines, especially the upper or duodenal and jejunal parts of the latter, were intensely congested, and bore all the aspect of acute inflammatory action. The piece of canvas evidently had caused a stoppage in the alimentary canal; and the secondary effects of this had been an enormous amount of secretion of bile, the gall-bladder being excessively distended with it, the vessels and ducts of the liver everywhere containing an unusual abundance of biliary fluid, of which also traces existed in the duodenum and stomach. No other foreign bodies were found in the intestinal tract. The lungs were very much congested, but all the other organs presented the appearance of health.

Thus it would seem that the Sea-Bear had in some unknown manner obtained and swallowed the foreign bodies already spoken of, which produced a stoppage in the alimentary canal, and by their irritation brought on a bilious, or, as it is sometimes called, gastric fever, under which the poor creature succumbed.

On consideration, the symptoms bore out the post mortem examination. The reason of the chest or pneumonic symptoms may be best explained by the fact of the foreign body's lodgment in the first part of the intestines, which in this animal are protected by the posterior ribs; and the unusual dulness on both sides of the inferior (or posterior) part of the thorax was due to the lobes of the liver occupying both the right and left hypochondriac regions.

Tenderness of the abdomen was thus absent. The cutaneous coldness, no doubt, was produced by the biliousness. The laboured respiration occurred from the long congestion.

In the present instance it may be said that a lesson ought to have been received from the circumstance that on a former occasion multitudes of fish-hooks were discovered in a Seal that had died in the Gardens. It may be answered that great care has always been taken on this score, every fish given to the Sea-Bear having been gutted. How the canvas and hook came to be swallowed is involved in mystery.

## 2. Note on the "Hwang-Yang," or Yellow Sheep of Mongolia. By Dr. J. E. GRAY, F.R.S., V.P.Z.S., &c.

The "Yellow Sheep," of which Dr. Lockhart has sent two skulls to the British Museum\*, has been described by Pallas under the name

"Feb. 16, 1867.

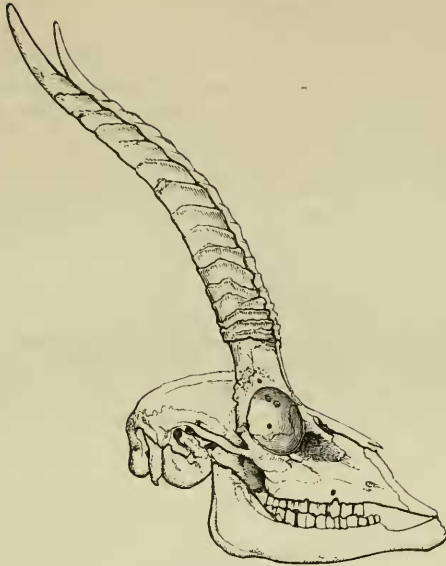
\* "MY DEAR SIR,—The horns I took to the Museum yesterday I brought with me from Peking. The animal to which they belong is called *Hwang-Yang*, the Yellow or Imperial Sheep. It is brought into Peking from Mongolia in large numbers in a frozen state, and sold for food. The flesh is much esteemed for its fine flavour and tenderness, and is eagerly purchased both by natives and foreigners.

"The European gentlemen in Peking used to go into Mongolia on shooting-expeditions, for the purpose of hunting the *Hwang-Yang*. The animal, however, is very wary, and generally keeps a long way out of range, so that the hunters are not very successful. It is considered a great feat to kill one of them.

"Yours very truly,

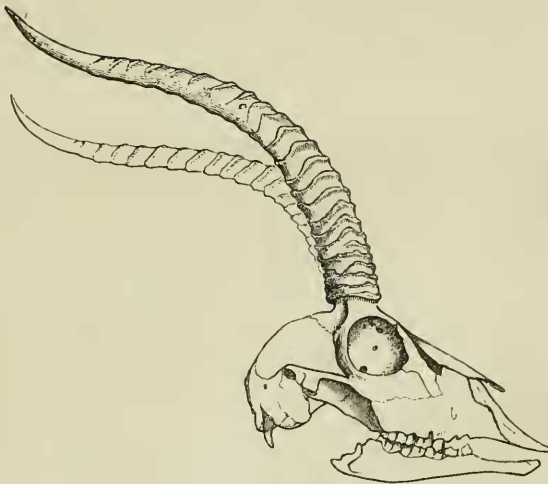
"W. LOCKHART."

Fig. 1.



Horns of *Procapha gutturosa*.

Fig. 2.



Horns of *Procapha picticauda*.

of *Antelope gutturosa* (Spic. Zool. vii. 14, t. 2, 3. f. 14-17). The horns are like those of *Gazella dorcas*, but rather longer and with more numerous and closer rings.

The "Yellow Sheep of Mongolia" (*Procapra gutturosa*) is known from the nearly allied "Goa" of Tibet (*Procapra picticauda* of Hodgson) by its larger size and the shortness and thickness of the horns, which have their tips turned upwards. The two species agree in the length, softness, and colour of the fur, and in having a distinct white rump-spot. The horns of the Goa are much more slender, compressed, and longer than those of the Yellow Sheep, and have the tips bent rather forwards. The length of the horn, along the curves, of the adult Yellow Sheep is  $9\frac{1}{2}$  inches, of the Goa  $11\frac{1}{2}$  inches. The latter has about twenty-four or twenty-five, and the former only twenty rings. There are also several differences in the skulls. The aperture of the front blood-vessels at the base of the horn in *P. gutturosa* is very much larger than that in *P. picticauda*. Pallas describes the horns of *P. gutturosa* as "*lutescenti-opaca*;" but in the two specimens in the British Museum they are of a dark blackish horn-colour, in this respect very different from those of the "Goa."

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March 14, 1867.

Dr. J. E. Gray, F.R.S., V.P., in the Chair.

The Secretary read the following extract from a letter addressed to him by Mr. J. H. Thomson, of New Bedford, Massachusetts:—

"I notice in the 'Proceedings' (1865, pp. 390 &c.) some account of 'Deformity of the Lower Jaw of the Sperm-Whale,' by Dr. J. Murie. Such deformed jaws are by no means uncommon; there are at this time some four or five specimens of such in the collection of our High School and the Natural-History Society of this place, and I have seen quite a number besides. As to the cause of this deformity, whalers generally attribute it to the fighting-propensities of the young 'Bull' Whales. I have never seen a specimen except from male Whales. The difference of teeth mentioned on page 396, 'Proceedings' (1865), is not in accordance with my observations. The lower jaws are very frequently brought home in whalers, to use up as bone for manufacturers and for ornaments &c.; you can find them lying about in a great many places in this vicinity. I have myself seen Sperm-Whale jaws with the sides of the same jaw differing by one or two teeth—that is, one or two more on one side than the other. The male Sperm-Whales in the rutting-season are very jealous of each other; the old 'bulls' at that time fight and drive off the young males from the 'school' or herd. Their mode of fighting is with their jaws mostly, so much so that you can approach a Whale directly behind to fasten or harpoon